

Treatment of Cancer Using Cytokine-Expressing Polynucleotides and Compositions Therefor

Abstract

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The present invention provides a pharmaceutical composition, comprising a non-infectious, non-integrating polynucleotide construct comprising a polynucleotide encoding an interferon ω and one or more cationic compounds. The present invention also provides methods of treating 10 cancer in a mammal, comprising administering into a tissue of the mammal a non-infectious, non-integrating polynucleotide construct comprising a polynucleotide encoding a cytokine. In addition, the present invention also relates to the methodology for selective transfection of malignant cells with 15 polynucleotides expressing therapeutic or prophylactic molecules in intra-cavity tumor bearing mammals. More specifically, the present invention provides a methodology for the suppression of an intra-cavity dissemination of malignant cells, such as intraperitoneal dissemination. Furthermore, the invention relates to compositions and methods to deliver polynucleotides 20 encoding polypeptides to vertebrate cells in vivo, where the composition comprises an aqueous solution of sodium phosphate.